

Virtual Learning challenge

# VR as Tool for Safety Training



Aalto University

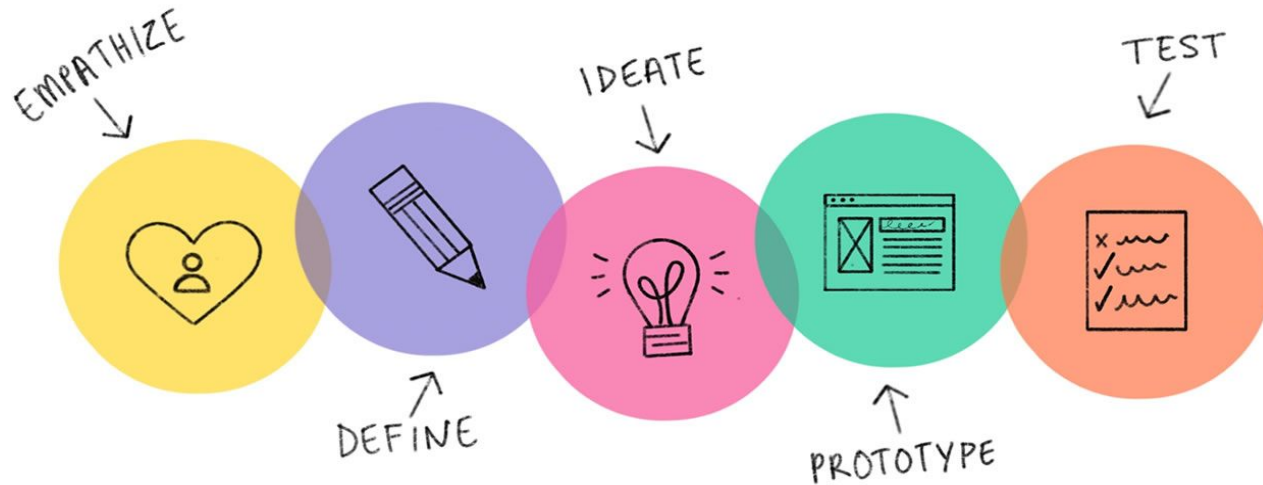


# Problem Statement

How do we provide hands-on, experiential training to first time mining sites truck drivers without exposing them to the dangers associated to their work on sites?



# Design Thinking



# Design Thinking



## EMPATHIZE

- Users - Truck Drivers in Mining Site. Could be male or female
- Haven't received prior formal training with simulated conditions
- Have an instructor who guides them for the first month at operation.
- Cannot drive in adverse conditions for the first three months since they start.
- 24 hours works, with poor lightening and slippery road conditions, driving heavy trucks, making drivers sometimes tired and weak



# Design Thinking

- How do we provide hands-on, experiential training to first time mining sites truck drivers without exposing them to the dangers associated to their work on sites?
- How could we avoid accidents to co-workers when truck drivers are training for first time?
- How could we help companies to avoid lose productive time using trucks for production and not for training?



**DEFINE**



# Design Thinking

## IDEATE



- VR app for driving training with simulated conditions of the mines
- Use of vehicle simulators for training of drivers
- Designing simulated conditions that helps to measure psychometry in the training for data points like endurance, focus, team play, problem solving.



# Prototype and Solution

Our solution combines the use of virtual reality and physical simulators to train and test mine truck drivers with data analytics APIs to extract essential psychometry data points such as focus, team play, decision making, problem solving, endurance, that are important for the job.

**PROTOTYPE**




# Impact

- Occupational safety for drivers workers and co-workers.
- Prevent accidents while training.
- Detect operators with higher and lower KPIs and differentiate training accordingly.
- Increased revenues to the industry.

In this case we use mining as example but we could focus on another industry, just considering the input from their data.







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